

Overview of the Massachusetts Source Water Assessment Program

Protecting Source Water

Massachusetts has over 1,600 public water systems that provide drinking water to homes, schools, businesses, and industries. Over 90 percent of the state's population depends on public water supply sources which are often vulnerable to contamination. More than 70 communities have shut down at least one source because it was contaminated. The Department of Environmental Protection (DEP) has had a water supply protection program since 1980. New federal requirements will help DEP focus its resources on improving protection statewide. As a result, local water suppliers and municipal officials will receive more hydrogeological and planning assistance from DEP for improved protection of local drinking water sources.

Incorporating New Requirements

The Federal State Drinking Water Act Amendments of 1996 emphasize the importance of protecting public drinking water. The law requires every state to examine existing and potential threats to the quality of all its public water supply sources and to develop a Source Water Assessment Program (SWAP) during the next two years. DEP's SWAP process will:

1. delineate protection areas for all public ground and surface water sources;
2. inventory land uses in these areas that may present potential threats to water quality;
3. determine the susceptibility of water supplies to contamination from these sources; and
4. publicize the results.

Source Water Assessments will help local and state officials target inspections and technical assistance where they are needed the most, encourage cooperative emergency response, and contribute to comprehensive protection of all public water sources.

Building On Existing Programs

Local Protection

State and local officials will use the SWAP process to enhance their drinking water protection programs. To date, 179 communities have adopted groundwater protection bylaws and 81 have adopted watershed protection regulations. Additionally, 59 public water systems meet DEP's most stringent requirements for groundwater protection. Despite this progress, many communities still lack adequate protection controls. With the SWAP process, local officials will receive assessment results accompanied by prioritized

recommendations for improving water supply protection. SWAP information can help educate the public and build support for program implementation. DEP will also assist municipalities with implementing land use controls for the most threatened sources, provide training and other guidance.

SWAP will provide valuable new information for the Massachusetts Watershed Initiative, a multi-agency effort to improve the quality of all natural resources in 27 watersheds. Watershed or basin teams will use the information in evaluating each watershed. Additionally, the basin teams will help disseminate SWAP results to the public.

Computerized Mapping

DEP will increase its use of the state's computerized mapping Geographic Information System (GIS) in preparing source water assessments. Currently, the locations of all public water supply sources, their protection areas, and surrounding land uses are available from MassGIS. GIS data layers with DEP regulated facilities, hazardous waste (21E) sites, and discharge points will be linked with site-specific information to determine a water source's susceptibility to contamination. Working with automated data will enable DEP to provide assessment results to the public through the Internet and other avenues.

Reporting Source Water Assessments

Water supplies and potentially threatening land uses will be displayed on maps linked to site-specific information. The illustration below (a website display page) depicts the type of map which will be produced with the state's computerized GIS system. Users will be able to access the maps on the DEP website. For example, a local official may click on a selected land use, such as the gas pump symbol, and get facility information and recommendations on best management practices. DEP will also provide these maps in printed form to local officials.



Involving the Public

DEP wants broad public input as it develops and implements its SWAP strategy over the next year. Technical and Citizens' Advisory Committees representing various groups are meeting regularly and public meetings are scheduled for the fall. The goal is to prepare an assessment strategy for approval by the U.S. Environmental Protection Agency by February 1999. Public participation will continue until all assessments are completed within three years.